



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,165	09/25/2003	Valerio Pruneri	UK02-012	7019
22928	7590	10/18/2005	EXAMINER	
CORNING INCORPORATED			MOONEY, MICHAEL P	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			2883	
DATE MAILED: 10/18/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,165

Applicant(s)

PRUNERI ET AL.

Examiner

Michael P. Mooney

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5, 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 6 - 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/25/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-3 and 6-7 in the reply filed on August 1, 2005 is acknowledged.

Claims 4, 5, 8 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Specification

The disclosure is objected to because of the following informalities: In the specification, the section heading "Detailed Description of the Invention" is missing. A possible location for the heading just above paragraph 0021. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 3 and 6 - 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al., in their publication "Bandpass Traveling-Wave Mach-Zehnder Modulator in LiNbO₃ with Domain Reversal".

Regarding independent claim 1 as claimed, Wang et al. teach an electro-optical device (Fig 1b or c) capable of effecting an alteration in an optical output in response to an electrical signal (page 2, col 1, lines 7-9 and Fig 1 since electrodes are used to apply the signal) selected from modulating its amplitude, modulating its phase (page 2, col 1, lines 7-9) and switching it, comprising a body of electro-optically active material (page 2, col 1, lines 7-9 - LiNbO_3), waveguides for passing light through the body (Fig 1b or c), and electrodes for applying an electric field (page 2, col 1, lines 7-9 and Fig 1) with a frequency in the microwave region (page 1, col 1, para 1, lines 4-7) to the body, the transverse geometry of the device being such as to maintain adequate phase velocity matching between optical and microwave frequencies (abstract), the device having a discontinuity such that the direction of the electro-optic effect is reversed for a portion of the length of the device adjacent its downstream end (page 2, col 1, lines 9-12 and Fig 1b, +Z and -Z).

Regarding claims 2 and 3, the electro-optic material is uniform apart from a single discontinuity at which the crystal domain structure is inverted (page 2, col 1, lines 9-12) or the poling is reversed (page 2, col 1, lines 14-17).

Regarding claims 6 and 7, the electro-optically active material is z-cut lithium niobate (page 2, col 1, lines 18-20).

Art Unit: 2883

Conclusion

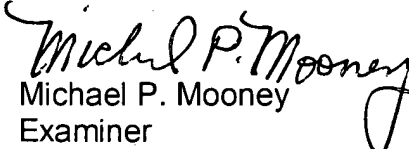
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 4,709,978 to Jackel describes a Mach-Zehnder modulator with waveguides, electrodes formed on z-cut lithium niobate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-

1562.


Michael P. Mooney
Examiner
Art Unit 2883


Frank G. Font
Supervisory Patent Examiner
Art Unit 2883

FGF/mpm
10/17/05